REMARKS

Applicants respectfully request reconsideration of the present application in view of the below remarks. Applicants appreciate the allowance of claims 1-14 and 33, and the recognition of allowable subject matter in claims 18-31. Applicants thank the Examiner for his time and consideration during a telephonic interview with Examiner's representative on April 2, 2010. During this interview, the Examiner and Applicant's representative discussed and developed proposed amendments to claim 15, which amendments have been incorporated in the instant Amendment after Final. The Examiner and Applicants' representative agreed that the instant amendments made to claim 15, if made as an Amendment after Final, would be entered and would overcome the art of record and would put the entire application in a condition for allowance, assuming that no further prior art is located. Applicant's representative and the Examiner further agreed that, should any further prior art be located that would be relevant to claim 15, that the Examiner would contact Applicant's representative via telephone to discuss.

Claims 1-33 are pending in the application. Claims 1-14 and 33 are allowed. Claims 15-17 and 32 are rejected, of which claims 1 and 15 are independent claims. Claims 18-31 are objected to. Claim 15 is hereby amended.

The Prior Art Rejections:

The Examiner has rejected Claims 15 and 32 under 35 U.S.C. § 102(b) as allegedly being anticipated by Page (U.S. Patent No. 4,467,220). Claim 15, as amended herein, expressly requires [emphasis added]:

> A power system comprising:
> a common power source component;
> at least two or more power system subsystem components the two or more power system subsystem components comprising k power system subsystem components; and
> a ***plurality of direct, independent electrical interconnects to connect said common power source component individually to each one of the k power system subsystem components, each respective direct, independent electrical interconnect originating at the common power source component and terminating at a respective one of the k power subsystem components without electrically coupling to any of the other k power***

system subsystem components or to any other electrical element, wherein the direct independent electrical interconnect comprises one or more conductors.

In particular, note that claim 15 expressly requires that the direct independent electrical interconnect individually connects only the common power source and the respective one of the k power subsystem components (i.e., by originating at the common power source and terminating at the respective one of the k power subsystem components) without electrically coupling to any other of the k power subsystem components and without electrically coupling to any other electrical element, whether in or out of the power system. By electrical element, as used and illustrated in the Figures and Specification of the instant application (which refer, e.g., to energy storage elements, failed elements, subsystem elements, etc.), and as understood in the art, Applicant is referring to at least includes elements that draw current (e.g., resistors, loads, etc.), elements which can develop a voltage across them (e.g., capacitors, storage elements, diodes), and elements that perform electrical operations (e.g., circuit breakers, switches, etc.).

This limitation in claim 15 is advantageous, as one of skill in the art will appreciate, because having the electrical interconnect not be connected to anything but the common power source and the respective k power subsystem component (i.e., not be connected to external loads, for example) ensures that, if that respective k power subsystem component fails, no other components that are coupled to that same electrical interconnect will be affected. Conversely, with the invention of claim 15, failures of a single interconnect (e.g. a ground fault) will not lead to additional failures in the system thereby limiting fault propagation and improving survivability. In addition, this simplifies system design, because it is not necessary to provide and control various circuit breakers or switches to route power/signals around the failed component so that other components connected to the line can operate -- in the circuit of claim 15, no other electrical elements (whether in or out of the system) are electrically coupled to the interconnect to the common power source other than the respective one of k power subsystems.

As explained further below, the system of Page is completely opposite to the requirements of claim 15. Page expressly illustrates, e.g. in the FIG. 10(a) cited by the Examiner, a power circuit where a given input power source electrically couples to another input

power source through a pair of load buses/feeders, where there are also several circuit breakers (denoted by the symbol "x" on line 12) and so-called "tie conductors" (denoted by a dashed line) that also are part of the "interconnect" and electrically interconnect load buses in the manner shown in FIG. 10(a) (where the load buses may further include one or more loads). Consider, as Page states above, the connection that runs between, e.g., input power source S1 (which the Examiner contends is equivalent to the common power source) and input power source S2 (which the Examiner contends is equivalent to one of the k power subsystems of claim 15. The Examiner contends this connection is a (1) "*direct independent electrical interconnect*" that (2) "*originates at the common power source component and terminates at a respective one of the k power subsystems*" and which makes such an electrical interconnection (3) "*without [ELECTRICALLY - AS ADDED HEREIN] coupling to . . . any other [ELECTRICAL - AS ADDED HEREIN] element in the power system*." Although the illustrated connection in Page satisfies parts (1) and (2) above, it clearly does not and cannot satisfy (3), as explained below.

First, Page clearly illustrates in FIG. 10a that this connection, which the Examiner views as an interconnect, is really two branch segments, 1c and 2c, connected together by a tie conductor, where each branch segment has within it one or more circuit breakers/switches, each denoted by the symbol "X" in FIG. 10A. These circuit breakers/switches in each branch, as well as the loads connected to feeder branches (1a, 4a, etc., see further below) at least constitute "other electrical elements" of Page's illustrated power system, in complete contravention of claim 15. That is, the electrical interconnect between S1 and S2 is electrically connected at least also to the circuit breakers/switches and loads of the feeder branches, and not **just** between S1 and S2, as claim 15 would require. Even if the circuit breaker/switch were considered to be part of Page's system, and the load bus were considered to be outside of Page's system, as the Examiner considered during the telephonic interview on 4/2/2010, the limitations of claim 15, as amended herein, are not met, because the connection, as explained herein, still electrically couples electrical elements, which is contrary to claim 15. It also should be noted that Page teaches a very different interconnect structure from the one shown in claim 15 of the instant application. Page's structure represents a plurality of rigid cells (see claim 1 at columns 21-22 of

Page), whereby in a larger network, the cells (or their sources) would have no connections to non-adjacent cells.

Regarding the loads being connected to the branches, in Page at col. 11, lines 53-61 [emphasis added] of Page, he further states (in describing in FIG. 10a), that:

> Each of the six branches of the 4.times.6 network have *three circuit breakers (or other suitable switching means operating under any suitable manual, automatic, or mixed control) as denoted by the symbols "X"* in FIG. 10a. Each source supplies power through three adjacent breakers to *three associated load buses or feeders designated 1a, 1b, 1c; 2a, 2b, 2c; etc., and to which loads are connected as required.*

Thus, not only does the connection between S1 and S2 at least connect to several circuit breakers, because it is a load bus, it also potentially can be electrically connected to loads, any of which also could be considered to be another "electrical element" in the power system, as electrical element is further explained above. Note that Page considers loads to be part of the power system (see, e.g., col. 21, line 64, in claim 1 of Page). Thus, Page absolutely does not meet the required limitations of claim 15.

Because Page does not teach, or even suggest, each and every limitation of independent claim 15, Page cannot possibly teach (or even suggest) each and every limitation of claims that depend from claim 15, including but not limited to rejected claims 16, 17, and 32, as well as objected-to claims 18-31.

Further regarding dependent claim 32, the Examiner asserts that Page teaches all of claim 32's additional limitations including the "*sequential mode wherein a first power source provides power for said power system for a first time interval and a second power source provides power for said power system for a second time interval*". More details about this sequential mode are provided in connection with FIGSs. 7A and 7B of the instant application, along with the accompanying description at page 9, line 11 through page 10, line 2. Applicants have carefully reviewed the Page patent and remain confused by the Examiner's assertion that Page, too, teaches claim 32's recitation of a "sequential mode" (along with all the other limitations of claim

32 and parent claim 15). Nowhere in Page is any type of timing or sequential power system or power supply operation mentioned whatsoever. The passage of Page cited in support for the rejection merely describes how the various circuit breakers of Page can be operated to switch in certain power supplies if one of the other power supplies goes out of service, but nowhere is it taught or suggested that any of pages power sources operate sequentially or for any particular time intervals. Moreover, although Page does mention that the system of FIG. 10A can be under automatic control, e.g., to control the operation of the circuit breakers, Page does not teach or suggest that any such automated operation would include sequential operation of any of the power sources.

In addition, regarding dependent claims 16 and 17, the Examiner admits that Page does not teach that one of the direct independent electrical interconnects comprises a control signal interconnect, and the Examiner relies on Whyte (U.S. Patent No. 3, 911, 415) in combination with the teachings of Page, to supply this missing limitation. Specifically, the Examiner contends that Whyte allegedly teaches an interconnect between power subsystems comprising a power interconnect and a control signal interconnect. Applicants respectfully disagree, and remind the Examiner that any interconnects taught or suggested in Whyte or any other art of record still must meet all the requirements for such a "direct independent electrical interconnect" of independent claim 15, especially the requirement that any such interconnect not couple to any of the other k power system subsystem components or to any other element in the power system. In the case of Whyte, the cited connection lines (telephone lines 43a, 43b for control signal and 24b for power interconnect) do not meet the requirements of claim 15.

Rather, these lines 43A, 43B are shown as being interconnected to each other - thus, Whyte patent does **not** teach or suggest (using the language of claims 15 and 16) "*direct, independent electrical [control] interconnects to connect [the central terminal 38] individually to each one of the [substations 18A, 18B] each respective direct, independent electrical [control] interconnect originating at the [central terminal 38] and terminating at a respective one of the [substations 18A, 18B] without coupling to any of the other [substations18A, 18B] or to any other element in the power system*" . That is, the control line 43A is shown as being electrically

coupled to the control line 43B (and vice versa), so it cannot possibly meet the limitations of the interconnect required by parent claim 15. Also, Whyte states that "the transmitter output and the receiver inputs are connected to common points of the power line conductor 24B at each substation by couplers 53A and 53G" (see column 7, lines 60-63). Moreover, Whyte also states that "...the outputs of the transmitters T2 and T3 are connected to the common point F by the coupler 53C" (column 8, lines 34-34). Thus, Whyte does not describe independent interconnects, as required at least by claims 15-17.

Similarly, the connection line in Whyte that the Examiner describes as a "power interconnect" (i.e., power line conductor 24B) also cannot possibly be viewed as an electrical interconnect that meets the limitations of claim 15, because the power line conductor 24B of Whyte is clearly illustrated in FIG. 1 as connecting together multiple system elements (e.g., at least connecting substation 18A, distribution network 16 (which includes the many distribution transformers 34A, 34B, et, as described at col. 6, lines 1-29), signal reconditioning repeaters 46, 47, 48, and substation 18B, all contrary to the teachings of parent claim 15, as amended herein.

Thus, for at least the reasons given above, Applicants maintain that claims 15-17 and 32 are patentable over the art of record, taken individually or in combination. Because Applicants maintain that independent claim 15 as amended herein is patentable over the cited art, Applicants further maintain that dependent claims 18-31 (all of which depend from claim 15) are likewise patentable over the cited art and no longer depend from a rejected base claim. Thus, Applicants respectfully request that the rejection of claims 15 and 32 under 35 USC 102, and the rejection of claims 16 and 17 under 35 USC 103, and the objections to claims 18-31 be withdrawn

The Applicants do not acquiesce to any assertions made by the Examiner not explicitly addressed herein.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Response or this application.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845, including but not limited to, any charges for extensions of time under 37 C.F.R. §1.136.

Respectfully submitted,

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